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Special Section OUTLOOK Inside

COAL INDUSTRY NEWS

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10 Coal Projects Meet SFC Deadline, Given 2nd Look

By Marcy Gordon
Staff Writer

WASHINGTON — Ten coal conversion projects have survived the "first cut" of the Synthetic Fuels Corp.

The sponsors of the 10 projects have responded to the corporation's request for detailed information under its first solicitation for financial assistance.

The 10 proposals, along with 17 other synfuels ventures, answered the corporation's letter by the Jan. 4 deadline — and are now considered eligible for further consideration under the initial solicitation. But the other 40-or-so coal projects that originally applied to the corporation for assistance and didn't make the deadline will be able to reapply under the second solicitation, which closes May 31.

SFC Depufy Vice President for Projects Ralph Bayrer told reporters last week that contracts for financial assistance will likely be signed four to six months after the board's meeting in mid-February.

Last month, the SFC staff identified to the board seven of the 63 project proposals before it as fully meriting further consideration. Another seven could be recommended for conditional passage to the corporation's next phase of deliberations.

The proposals classified by the staff as most mature in terms of engineering design include two involving coal gasification. Most fall into the "next-to-most-mature" category — including another two gasification ventures and four liquefaction proposals.

The 10 coal projects that have been retained for the first solicitation are:

• North Alabama Coal Gasification Project, Murphy Hill, Ala. — Originally started by the Tennessee Valley Authority, the project would use a GKT gasifier to produce 355 million gallons a year of methanol, starting in 1986. Sponsors: Santa Fe International, Kidder Peabody and Air Products & Chemicals (loan guarantee requested).

• Cool Water Gasification Project, Daggett, Calif. — Would use the Texaco gasification process to produce 4,300 barrels of oil equivalent per day, starting in 1983. Sponsors: Texaco, Inc., Southern California Edison Co., Electric Power Research Institute, Bechtel Power Corp., General Electric Co., Empire State Electric Energy Research Co. and JCWP, a Japanese consortium.

The sponsors originally requested a joint venture with the corporation, but are now seeking a price guarantee.

• MAPCO Coal-to-Methanol Project, Carmi, Ill. — Would use the Texaco gasification process and the Lurgi low-pressure methanol synthesis loop to produce 35,000 barrels per day of methyl fuel, starting in 1987. Sponsor: MAPCO Synfuels, Inc., a subsidiary of MAPCO, Inc. (price and loan guarantees).

• Breckinridge Project, Breckinridge County, Ky. — Would use the H-Coal direct liquefaction process to produce 49,800 b/d of liquid products, starting in 1987. Sponsors: Ashland Oil, Inc. and Bechtel Petroleum, Inc. (loan guarantee).

• EG&G Project, Fall River, Mass. — Would use the Texaco gasification process to produce 758,000 gallons of methanol and 13,000 megawatt hours of electricity a day, starting in 1988. Sponsors: EG&G Inc. and Brooklyn Union Gas Co. (loan guarantee).

• A-C Valley Corp. Project, Venango County, Pa. — Would use a combination of Koppers gasification, ICI methanol synthesis and Mobil methanol conversion to produce 9,300 b/d of gasoline and 200 b/d of liquefied propane gas (LPG), starting in 1986. Sponsor: A-C Valley Corp. (loan guarantee).

• Memphis Light, Gas & Water Project, Memphis, Tenn. — Would use the U-gas pro-

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NEWS ROUNDUP

British coal miners will vote Thursday and Friday on the National Coal Board's latest pay offer. Board Chairman Derek Ezra appealed to the 240,000 miners to accept the terms, saying the board cannot afford to offer any more. But the National Union of Mineworkers executive board has rejected the offer of a 9.3 percent increase. The union is asking its members for authority to call a strike if necessary.

* * *

Poland's coal exports dropped by half in 1981, causing a drop of at least $1 billion in revenues, reports the official news agency PAP. It said exports last year fell to 15.1 million metric tons from the 1980 level of 30.3 million. The news agency said the revenue decline led to a correspondent reduction in imports of goods, adding to the country's economic tensions. Of those 1981 exports, 7.2 million metric tons went to Communist Bloc countries and 7.9 million to customers in the West.

Warsaw Radio said earlier that total

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Preparing Nozzle for Great Plains Project

A WORKER at Gulf-Western Manufacturing Co.'s Lenape facility checks a 13,000-pound nozzle forged at the West Chester, Pa., plant. The nozzle and others like it will be used by Chicago Bridge and Iron Co. for the Great Plains Coal Gasification project near Beulah, N.D. The gasification plant is expected to manufacture 125 million cubic feet of synthetic natural gas daily.

Amax is Talking with Ruhrkohle, Others on Possible Joint Venture

By Gene Smith
Editor

NEW YORK — Amax Inc., the nation's third largest coal producer, is "continuing discussions" with Ruhrkohle AG, West Germany's largest coal producer, on the possibility of a joint venture aimed at developing Amax's vast coal reserves.

A spokesman for Amax said that discussions have also been held with "other companies as well." The company acknowledged earlier that Kawaski Steel Co. of Japan was among the potential joint venture partners and that officials of the Japanese firm recently visited Amax's Wyoming properties.

Amax said that the talks center in its Amax Coal Co. subsidiary. It produced some 40.5 million tons of coal in 1980 and has reserves placed at 3.3 billion tons. Its Belle Ayr mine outside Gillette, Wyo., was the nation's largest bituminous mine in 1980, turning out a little over 16 million tons of coal.

Company statements have been somewhat fuzzy as to just what properties might be involved in any joint venture, but it was confirmed that the discussions to date have been "either for all of the assets or certain reserves." Amax Coal is based in Indianapolis, and most of its reserves are in the Midwest.

Confirmation of the "discussions" was made after news reports from West Germany said that Ruhrkohle, Amax and certain other unidentified European companies were about to announce formation of a coal consortium capitalized at $3 billion.

Rumors of the talks with Ruhrkohle had been rampant on Wall Street in recent

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INSIDE

ACCELERATED LEASING plans by the Interior Department come as the Office of Technology Assessment questions if the coal will be needed. **Story on page 3.**

THAT OXY-ENI DEAL could be part of a larger trend, some analysts suggest. **Story on page 4.**

ROBERT REDFORD tells why he worked to help assemble the Institute for Resource Management **on page 5.**

SWITCHES FROM OIL to coal by New York utilities are lagging, and a leading researcher has some ideas why. **Story on page 6.**

Reagan's Plan to Dismantle DOE May Meet Resistance in Congress

By Steve Marcy
Staff Writer

WASHINGTON — Congress had adjourned for the Christmas holidays when the Reagan administration outlined its plan to dismantle the Department of Energy. Consequently, few on Capitol Hill have given any thought to what could be considered the latest adminnistration attempt to keep another campaign promise.

Most will reserve judgment until the administration formally transmits its proposal later this month. By then, lawmakers will already be deep into the burdensome questions about the 1983 budget deficit and whether to tax or not to tax to keep it under control.

Still, early indications are that the plan to transfer most DOE functions to the Interior and Commerce Departments would receive lukewarm to cold support.

Some oppose the concept of removing energy policy from a central agency; energy cuts across all facets of the economy and society and so should have a center of attention. Others believe, as Senate Energy Committee Chairman James McClure, R-Idaho, has often stated, that dismantling DOE would "send our allies the wrong message" about U.S. resolve to make itself secure against the vagaries of shifting energy supplies.

"Wrong Signal"

His Democratic counterpart, Sen. Henry Jackson of Washington, echoed those sentiments and added that it would be sending the "wrong signal at the wrong time to our allies, to our adversaries and particularly to our partners in the International Energy Agency." Jackson said that DOE dismemberment would lead to situations where "the left hand of our policy making would not know what the right hand is doing."

Jackson is a high-ranking minority member of the Energy and Governmental Affairs Committees, giving him influence regardless of where the Reagan proposal is referred. Normally when Congress is asked to move governmental boxes around, the task falls to Governmental Affairs. It had jurisidiction over the original DOE organization act.

Congressional committees designated to review the proposal could ignore it and assure DOE's survival. But the Reagan administration plans to catch Congress' attention by submitting a budget request that assumes DOE no longer exists. Money for its remaining programs will be included in the Commerce and Interior Department agencies where the administration wants them. This will force Congress through the budget process to actively emplace the programs back in DOE if it wants to keep it.

Policy Backwater

Some Capitol Hill sources say congressmen and senators are sure to wonder about the Commerce Department's ability to take the lead in such key areas as nuclear weapons and energy research when it has been in a policy backwater for decades. The oil glut, induced partially by recession and OPEC disarray, is fragile and energy is certain to be a front-line issue at some future point.

The Reagan plan transfers to Commerce nuclear energy research, nuclear weapons research and manufacturing, fossil research, solar research, alcohol fuels and energy storage. Also placed there would be the Energy Information Administration.

To Interior would go resource-related functions, including the strategic and other national petroleum reserves and hydroelectric dams operated by the Power Marketing Administrations.

Exactly where in Commerce the energy reseach programs would be housed is uncertain. There has been some talk of making them semi-independent on the order of the old Energy Research and Development Administration, only this time calling it the Energy Research and Technology Administraion. This concept could find some favor on Capitol Hill, especially if the agency could be sprung totally free of Commerce, sources say.

Warm Reception

An especially warm reception for the concept might be given by the House Science and Technology Committee, which would then maintain its jurisdiction over energy research and find that it also would fit easily into its jurisdiction over the National Bureau of Standards and the National Oceanographic and Atmospheric Administration.

A problem, though, will be the money available in the research budget itself. For fossil fuels, the Reagan administration is rumored to be proposing only $106 million for 1983, compared to the more than $1 billion the Carter administration was spending its last year in office.

Magnetohydrodynamics and enhanced oil and gas recovery would be ended. About $20 million would remain for direct coal liquefaction and $11 million for surface coal gasification. *In-situ* coal gasification would also be phased out, with the possible exception of research into steeply sloping beds.

From $20 million to $30 million would be devoted to the environmental consequences of energy use.

The Reagan plan would transfer most of the Economic Regulatory Administration to the Justice Department until it clears up the backlog of entitlements and pricing cases from the days of controls on oil prices. The fuels conversion office of ERA, responsible for issuing orders to electric utilities mandating their conversion from oil to coal, would be transferred initially to DOE's emergency preparedness office and then move with it to Commerce.

U.S. COAL CONSUMPTION AND PRODUCTION OUTLOOK

(Million Tons)

	Final 1979	Final 1980	Revised 1981 Forecast	1981 Forecast	Percent Change 1982/81
CONSUMPTION					
DOMESTIC					
Electric utilities	526.0	568.3	596	620	+4.0
Coking coal	77.0	66.5	65	72	+10.8
General industry and retail	74.3	64.2	77	80	+3.9
Total domestic Consumption	677.3	699.0	738	772	+4.6
EXPORTS TO:					
Canada: steam	11.6	10.8	10	11	+10.0
Metallurgical	7.5	6.3	5	7	+40.0
Total	19.1	17.1	15	18	+20.0
Overseas: steam	2.5	16.0	31	36	+16.1
Metallurgical	43.1	56.8	49	51	+4.1
Total	45.6	72.8	80	87	+8.8
Total exports	64.7	89.9	95	105	+10.5
Total Consumption	742.0	788.9	833	877	+5.3
PRODUCTION					
East	554.9	572.6	530	593	+11.9
West	221.4	251.0	275	293	+6.6
Total production	776.3	823.6	805	886	+10.1
IMPORTS					
Coal	2.1	1.2	0.5	0.5	xxx
Coke	4.0	0.7	0.5	0.5	xxx

Source: National Coal Association Economics Committee.

NCA Projects Record U.S. Consumption During 1982

WASHINGTON — Led by a 10.5 percent increase in exports and a slight rebound in the steel industry, coal consumption in 1982 should reach a record 877 million tons, the National Coal Association predicted in a wrapup of 1981 and forecast for 1982.

Total production should also rebound from the strike-torn 1981 level of 805 million tons and reach 886 million tons in the new year, with the lion's share of that, 593 million tons, coming east of the Mississippi.

Western production will rise to 293 million tons, 6.6 percent more than the 1981 level of 275 million tons. Although NCA says western production was largely unaffected by the strike, its growth from 1980's 250 million tons to 1981 showed a 9.6 percent increase.

The export projection for 1982 includes 18 million tons to Canada and 87 million tons overseas, a 105 million ton total that is 10.5 percent higher than 1981's expected final exports of 95 million tons.

This increase occurs despite an economic recession in Europe, the NCA's economic committee, compiler of the forecast, noted.

Where It Will Go

Fifty-one million tons of the overseas exports will be metallurgical (or met) coal and 36 million tons steam coal. Seven million tons destined for Canada will be met coal and 11 million tons steam. The greatest gains in the overseas market occur in steam coal however, showing a 5 million-ton increase from 1981 to 1982 while met coal exports should increase by only 2 million tons.

But that projected increase in overseas met coal exports for next year recovers only part of the sales lost to an Australian industry also rebounding from strikes. U.S. overseas met coal exports reached 56.8 million tons in 1980 when the Japanese were cut off from Australian coal.

NCA is banking on an economic upturn and the need of the U.S. steel industry to replace inventories for an increase in coking coal consumption that should reach 72 million tons in 1982, up 10.8 percent from the depressed level of 65 million tons in 1981 and 66.5 million tons in 1980. NCA projections assume raw steel production of 133 million tons.

Utility Demand

The electric utility industry will continue to be the largest consumer of coal, but its rate of growth of coal use in 1982 will be only 4.6 percent compared to the 5.6 percent increase between 1980 and 1981. The 620 million tons NCA projects the industry to burn in 1982 will account for 80 percent of all coal used. Coal-fired power plants accounted for 52.4 percent of all electricity generated in 1981, the largest share since 1967.

Utilities had coal inventories large enough going into 1981's 72-day strike for total coal consumption to reach 833 million tons, 28 million tons more than the 805 million tons expected to be finally produced.

The electric utility rate of coal use is down slightly from recent years because existing coal-fired power plants, with their significantly lower operating costs, are being used at full capacity. A financially strapped electric utility industry that is also facing lowered demand for electricity has done this rather than rapidly building new coal-fired power plants or convert oil-fired units to coal. NCA says some conversions will still occur, however. — **Steve Marcy**

Economy Curbs Appalachia Coal Output

By Mike Myer
Correspondent

CHARLESTON, W. Va. — Coal production in the 13-state Appalachian region will increase by about 2 percent a year during the next decade but will be constrained by several economic factors, according to a study by the Appalachian Regional Commission.

Production in ARC states, which include all major eastern coal areas, should increase from 1980's level of 427 million tons to about 527 million tons during the coming decade, according to the study.

But slower domestic economic growth, energy conservation and stable oil prices will limit coal's growth, said experts hired by ARC for the study. The oil price factor, which could limit coal's growth domestically, may increase the Appalachian region's exports of steam coal, they added.

Doubling of world oil prices in recent years, along with problems in Poland and Australia and restrictions on South African coal sales, contributed to an increase in world demand for Appalachian steam coal, said the experts.

Another major factor which could increase that demand is overcapacity in the domestic coal industry, leading to below-normal prices for American coal, according to the study.

Though American coal cannot compete in price with that from Australia or South Africa, buyers on world markets also consider stability of supply in the long term, quality and the need for several different suppliers. These factors, along with the fact that domestic coal is a "market guide" which helps keep coal prices higher worldwide, should ensure continued success in the export arena for American coal, said the ARC experts.

They predicted that world export demand will increase from its 1979 level of 209 million tons to 334 million tons by 1985 and will double by 1990, then triple by 1995. About one-third of this total will come from the United States by 1995.

Appalachian states, which now sell about 90 percent of the coal exported from America, will benefit from growing demand for steam coal in western Europe, said the experts. They predicted western European sales of about 26 million tons of Appalachian steam coal by 1985, 45 million tons by 1990 and 58 million tons by 1995.

Rising Demand

Domestic demand for Appalachian steam coal also will increase throughout the eastern United States, primarily in New England and the southeast, according to the ARC.

Major rail carriers will abandon 1,300 miles of track in the Appalachian area, primarily affecting small coal shippers, who will have to find ways to consolidate coal traffic, the study indicates.

'82 OUTLOOK

IEA Sees Coal Supplanting Oil as Top Fuel Source by Year 2000

By Michael Parrott
Correspondent

PARIS — In 20 years, coal will have replaced oil as the leading energy source within the industrialized world, say projections in a new International Energy Agency study.

It adds that increased coal use may play a key roel in IEA member countries, the world's leading industrialized nations, reaching more than 80 percent energy self-sufficiency as a group.

Although the opinions expressed in the report are those of the author, it is the first time the IEA has given such a detailed breakdown of the likely consumption and production figures in the year 2000.

According to the report "Shaping the Energy Transition", the IEA countries, which include all the major western nations except France, will continue to rely on oil more than any other fuel until 1990. But by the year 2000, coal will represent 35.5 percent of total energy requirements of 5.1 billion metric tons of oil equivalent (toe) compared to 25.9 percent for oil. In 1979, it only represented 20.0 percent out of 3.6 billion toe compared to oil's 50.3 percent.

In North America, the role played by coal will be even greater at 38.2 percent out of total demand of 2.75 billion toe compared to 21.8 percent for oil. This compares with 19.2 and 45.9 percent of 2.1 billion toe 21 years earlier.

The report, prepared by IEA economist Richard Lamb, shows how coal will supplant oil in electricity generation and industrial use. While total fuel outputs for electricity will rise from 1.2 billion toe to 2.1 billion, coal use is to reach 1.1 billion from 468 million. Oil and gas use are seen falling to 50 million toe apiece from 215 million and 128 million respectively.

Out of 500 million toe of extra production in North America, 368 million would come from coal, while oil and gas use would actually fall by 72 million and 65 million toe.

It is the same story in industrial use, where coal use is due to reach 485 million toe from 177 million and total energy consumption hit 1.7 billion from 1 billion. With fairly sharp increases also expected from gas and electricity, oil use is due to fall to 420 million from 475 million. Out of a 275 million toe increase in North American industrial consumption, 151 million would come from coal, while there would be a 43 million toe fall in oil use.

Lamb's report assumes a 1.5 percent increase in energy demand between 1979 and 1990 and one of 1.9 percent between 1990 and 2000, with economic growth just below 3 percent in the first period and just above in the second.

The report sees a steady increase in indigenous energy production of the IEA area of 2.5 percent a year bringing self-sufficiency to more than 80 percent from nearly 70 percent. Coal and other solid fuels are to provide more than 60 percent of the incremental domestic supply and nuclear most of the rest.

PROJECTED COAL USEAGE PATTERNS

(Million Metric Tons Oil Equivalent)

	1979	1990	2000
North America	-33	-63	-100
Pacific	+17	+11	-55
Europe	+27	+112	+195
IEA Total	+11	+60	+40

(+) imports, (-) exports.
Source: International Energy Agency.

Lamb sees coal production within the IEA reaching 1.8 billion from 727 million tons, with North American output reaching 1.2 billion from 538 million, and that of the Pacific 340 million from 72 million. European output is expected to rise slightly to 280 million from 197 million. It is largely thanks to this increased output that North America is likely to be 99 percent self-sufficient in energy in the year 2000 compared to 84 percent in 1979, and the Pacific will be 67 percent self-sufficent compared to 33 percent. With only a small increase in coal output, Europe's self-sufficiency will only reach 61 percent from 54 percent.

But with Europe's coal consumption due to more than double to 475 million toe from 231 million, its imports are due to reach 195 million from 27 million, with up to 155 million coming from the United States, Canada and Australia, and the rest from non-IEA countries such as Poland and South Africa. North America is expected to export 100 million tons of coal in the year 2000 compared to 33 million in 1979. The Pacific region, which was importing 17 million tons of oil equivalent of coal two years ago, will be exporting 55 million. But up to 135 million tons of Australian exports will remain within the region, going to Japan.

Lamb admits that several things could go wrong with his scenario. It is by no means certain that enough coal-fired and nuclear capacity will be brought onstream in the electricity field, while industry may not switch away from oil to coal, electricity and gas. The required infrastructure to receive and handle coal imports may not be completed.

Lamb claims that if adequate infrastructure is not built in Europe and the Pacific, coal use in industry could be reduced by up to 50 million toe and 60 million toe respectively. But even then eight coal transshipment facilities of over 20 million tons of coal capacity would still be in Europe and four in Japan.

If such a reduction in coal use occurred, the IEA's oil imports might fall to only 17 million barrels daily in the year 2000, from 25 million in 1979,instead of reaching 15 million b/d.

Cleaned Coal Will Become More Important

(Continued from page 11)

at the end of 15 years, if interest rates averaged 15 percent.

The passing of the small independent operator will probably never be complete, but the trend may be irreversible. I strongly suspect, however, they will reappear as contract miners for large operators who will own and control the reserves, the mining operations, and the cleaning facilities, and will provide the necessary technical, financial, and marketing assistance.

As long as there are surface mine reserves and above drainage punch mine reserves which can be coordinated by a financially sound company and mined by efficient contractors — and certainly this will be the case in the time frame we are discussing — this method of operation will likely be a major factor in the coal industry. The net effect will not be greatly different than when the smaller entrants were on their own.

EIA Forecasts 4.6 Percent Jump In Coal Consumption During 1982

WASHINGTON — Coal consumption should jump by more than 4 percent in 1982 while a slight decline in oil consumption should be offset by a slight increase in natural gas use during the year, the Department of Energy predicted in its latest short term energy forecast.

DOE's Energy Information Administration estimated that U.S. oil consumption was 4.3 percent lower in 1981 than it was in 1980 and predicts U.S. oil consumption in 1982 will decline by another 0.7 percent.

Coal consumption should rise by 4.6 percent to 768 million tons in 1982 after rising by 4.5 percent to 734 million tons in 1981, EIA predicted. Coking coal consumption should rise by 6.6 percent to 66 million tons in 1982 due to an economic recovery, EIA said.

Retail and general industry coal consumption after rising in 1981 is expected to decline slightly in 1982.

EIA estimated that coal production in 1981 was 802 million tons, 3.3 percent lower than in 1980 because of the United Mine Workers of America strike. The increased consumption during the year was drawn from large stockpiles.

Coal production is expected to rebound in 1982 to about 887 million tons, which will be 10 percent higher than in 1981 and a new record for U.S. production, EIA said.

EIA estimated that the U.S. exported 104 million tons of coal in 1981, which was 13.7 percent more than the amount exported in 1980. EIA predicted that exports will increase slightly in 1982, but cautioned its figures are subject to uncertainties about the international economy and labor situation.

The generation of electricity should rise by about 2.6 percent in 1982, with 54 percent of it generated from coal, EIA said. The growth in coal-fired generation should be 5.1 percent. — Donna Smith

Rail Movements, Mining Activity Should Increase in Western States

PORTLAND, Ore. — Rail movements of coal and mining activity in the West are expected to make upswings in coming years, an informal survey of company officials has found.

John H. Hertog, Burlington Northern senior vice president for coal, anticipates his company's unit train volume reaching a peak of 140 million to 145 million tons by 1985. The 1981 unit train movements came to 112 million tons. Final 1981 figures for total movements should reach 121 million tons.

Union Pacific expects 1981 movements to reach 31.5 million tons, a 3-million-ton gain. UP is also sharing with the Japanese firm C. Itoh the engineering costs of a $4 million development to the Long Beach port. The 5 million tons shipped from Long Beach in 1981 should be matched in 1982.

UP's first wholly owned coal mine, near Leucite Hills in Wyoming, should initially produce 500,000 tons yearly beginning mid-1982 out of 5 million tons of total reserves.

Northern Energy Resources, Inc. plans 1982 production of 25 million tons, a 5-million-ton increase. Its Resource Associates of Alaska, Inc. holds mineral rights on 5 million undeveloped acres. — **T.W. Kienlen**

Another Record Expected

Export Pace Will Continue Despite Dredging Setback

By Carl Cahill
Correspondent

NORFOLK, Va. — Export coal shipments through the Port of Hampton Roads are expected to continue at record levels in 1982 despite a setback in deepening ship channels from 45 to 55 feet.

For two years, port interests have requested $400-million in federal funds for the dredging, which would permit larger coal ships to use the harbor. The federal government historically has paid the total costs for ocean-harbor dredging and maintenance, but President Reagan has recommended the end of that practice this year.

A Senate committee has agreed with Reagan's recommendation, but the proposal has not been approved by the House.

If the President's recommendation prevails, "we may have to abandon plans to dredge both inbound and outbound channels to 55 feet and ask the Army Corps of Engineers to deepen only the outbound channels," according to J. Robert Bray, Jr., executive director of Virginia Port Authority.

Up to 300 coal ships a year use the harbor, and loss of the inbound channel dredging would limit the future of bulk imports while serving short-term coal export needs, Bray says.

A Corps of Engineers study in August 1980 indicated that outbound channels could be dredged an additional 10 feet for $160-million to $170-million, or about 40 percent of all channel costs.

Hampton Roads shipped 50 million tons — 75 percent of the U.S. total — of export coal during 1980 and matched that amount in 1981, making it the healthiest East Coast coal base on which to levy users' fees, according to T. Parker Host Jr., chairman of the Hampton Roads Maritime Association's coal and dredging committee.

"I think with our coal volumes and proximity to the Appalachian mines, we have better ability to fund a deeper channel than any other East Coast port," says Wilson J. Browning, a port shipping agent specializing in coal traffic. "Users' fees could actually be helpful in regulating our competition."

Although Hampton Roads interests have consistently lobbied for the continuation of federal subsidies, they say privately they can live with whatever program is legislated. Ports without sufficient deep-water-oriented cargoes to tax would find it almost impossible to secure buyers of their long-term improvement bonds, the maritime association committee has concluded.

By levying only 50 cents a ton on coal and grain, Hampton Roads could raise up to $30-million annually, Host reports. An abbreviated outbound channel program could be funded in less than a decade.

The National Coal Association and the VPA estimate that a foreign shipper using 150,000-ton ships instead of the current 80,000-ton vessel could save up to $5 per ton. The Senate committee estimated that it already costs a shipper $25 to $30 per ton to ship coal through Hampton Roads, with the user's fee adding only a few percentage points to the total cost.

"What the administration and the Senate committee are saying is that if the coal business is real and profitable, dig your channels and bond yourself," says Hal Brayman, a staffer with the committee.

FACTS & FIGURES — Domestic

	WEEKLY 12/26/81	12/19/81	12/27/80
Production			
Bituminous, recent week	10,782	16,490	10,580
Bituminous, year to date	791,118	—	817,288
Anthracite, recent week	77	106	97
Anthracite, year to date	5,938	—	5,955
Railroad carloadings			
Bituminous, recent week	79,867	122,130	72,906
Bituminous, year to date	5,691,410	—	5,706,228
Anthracite, recent week	160	240	139
Anthracite, year to date	19,179	—	27,176

Production data in thousands of short tons.
Source: U.S. Dept. of Energy, Energy Information Administration - Weekly Coal Report.

	WEEKLY 12/19/81	12/12/81	12/20/80
Production by states, bituminous and lignite			
Eastern			
Alabama	590	648	624
Georgia	—	—	2
Illinois	1,250	1,390	1,462
Indiana	545	583	574
Kentucky:			
Eastern	2,410	2,625	2,145
Western	950	995	967
Total, Ky.	3,360	3,620	3,112
Maryland	65	75	88
Ohio	710	690	850
Pennsylvania	189	2,040	2,507
Tennessee	210	310	329
Virginia	983	980	1,083
West Virginia	2,260	2,250	2,246
Total, eastern	10,162	12,586	12,877
Western			
Alaska	10	11	10
Arizona	175	190	225
Arkansas	9	10	9
Colorado	455	475	467
Iowa	12	13	11
Kansas	12	15	2
Missouri	90	105	115
Montana	750	740	859
New Mexico	310	340	276
North Dakota	295	315	310
Oklahoma	60	35	95
Texas	500	530	545
Utah	130	160	159
Washington	108	105	110
Wyoming	1,710	1,620	1,610
Total, western	14,788	4,904	4,902
Total, United States	16,490	17,250	16,680

In short tons (000).
Source: U.S. Dept. of Energy, Energy Information Administration - Weekly Coal Reports.

	9/81	8/81	9/80
Coal Labor			
All employees			
Coal Mining	259.1	256.0	247.5
Bituminous & Lignite	255.6	252.5	244.1
Production employees			
Coal mining	215.0	211.4	204.7
Bituminous & Lignite	211.9	208.3	201.6
Hours, weekly average			
Coal mining	41.9	42.0	40.6
Bituminous & Lignite	41.9	42.0	40.6
Earnings, hourly average			
Coal mining	12.34	12.09	10.95
Bituminous & Lignite	12.38	12.13	10.99
Earnings, weekly average			
Coal mining	517.05	507.78	444.57
Bituminous & Lignite	518.72	509.46	446.19

Source: U.S. Dept. of Labor, Bureau of Labor Statistics - Employment and Earnings.

	WEEK ENDED 12/19/81	12/12/81	12/20/80
Transportation: railroad			
Eastern district			
Bessemer and Lake Erie	1,744	1,897	1,502
Baltimore and Ohio	6,996	7,743	7,083
Chesapeake and Ohio	16,442	17,289	15,712
Consolidated Rail Corp.	8,163	8,253	8,777
Norfolk and Western	19,488	21,489	18,491
Pittsburgh & Lake Erie	—	—	232
Western Maryland	2,678	2,158	2,465
Other, eastern district	7	13	352
Total, eastern district	55,518	58,842	54,614
Southern district			
Clinchfield Railroad	2,521	2,342	2,419
Illinois Central Gulf	5,081	5,196	4,996
Louisville & Nashville	14,593	14,629	14,224
Southern Railway	9,550	10,024	9,270
Other, southern district	1	10	—
Total southern district	31,746	32,201	30,909
Western district			
Atchison, Topeka & Santa Fe	1,548	1,795	1,474
Burlington Northern	19,355	18,906	20,935
Chicago & North Western	473	576	379
Denver & Rio Grande Western	3,495	4,302	4,233
Kansas City Southern	101	102	99
Chicago, Mil., St. Paul & Pacific	1,411	1,226	975
Missouri-Kansas-Texas	40	74	72
Missouri Pacific	4,541	4,596	4,633
Soo Line	92	82	80
Union Pacific	3,766	4,267	3,312
Other, western district	44	46	18
Total, western district	34,866	35,972	36,210
Total, all districts	122,130	127,015	121,733

	WEEKLY 1/1/82	12/26/81	1/3/81
Monongahela River, Lock no. 3	308,170	239,914	202,330
Allegheny River, Lock no. 2	14,900	10,500	10,500
Ohio River, Montgomery Lock	271,400	256,081	246,512

In short tons through locks.
Source: U.S. Army, Corps of Engineers, Pittsburgh District.

	MONTHLY 10/81	9/81	10/80
Bituminous and Lignite			
Consumption			
Electric power utilities	47,685	48,385	45,019
Coal user stocks of coal			
Electric power utilities	154,165	144,097	177,564
Anthracite			
Consumption			
Electric power utilities	115	98	73
Coal user stocks of coal			
Electric power utilities	5,512	5,428	4,481

Note: Data given in thousands of short tons.
Source: U.S. Dept. of Energy Information Administration - Weekly Coal Report.

	9/81	8/81	9/80
Coal User Production			
Major direct users:			
Electric utilities (Mil. Kwh.)			
Weekly, 12/26/81	44,065	47,108	44,711
Steel (Short tons, thousands)			
Weekly, 1/2/82	1,679	1,588	2,232
Cement, Portland,			
U.S. shipments (Short tons, monthly, 11/81)	—	—	—
Other significant output:			
Aluminum (short tons, Month, 11/81)	364,375	395,565	427,394
Passenger car production, total (week ended, 11/81)	414,862	534,578	558,570
Machine tools: (monthly)			
Net new orders ($000, 11/81)	193,350	213,800	329,050
Shipments ($000, 11/81)	407,700	406,900	400,150

	MONTHLY 11/81	10/81	11/80
Price Indexes			
Coal	513.1	511.1	475.7
Anthracite	642.5	629.8	491.2
Chestnut, Pa.	547.8	524.3	426.7
Buckwheat No. 1, Pa.	N.A.	691.4	N.A.
Bituminous	508.0	506.4	474.3
Domestic sizes	619.5	619.5	584.8
Retail dealers	293.1	293.1	276.7
Industrial sizes, spot	435.3	437.7	396.4
Steam electric utility	138.2	140.7	120.1
Manufacturing	282.1	282.1	252.8
Metallurgical, high volatile	757.3	757.3	704.2
Metallurgical, low volatile	744.4	744.4	710.4
Industrial sizes, contrat	144.0	143.2	135.3
Steam electric utility	176.0	174.7	164.9
Manufacturing	128.9	127.1	120.2
Metallurgical, high volatile	106.1	106.1	98.9
Coke (foundry by-product)	470.3	470.3	430.6
Birmingham, Ala.	485.2	485.2	439.6
Milwaukee, Wis.	470.8	470.8	420.4
Detroit, Mich.	N.A.	N.A.	N.A.
Indianapolis, Ind.	484.3	484.3	437.7
St. Louis, Missouri	316.1	316.1	286.8
Philadelphia, Penna.	315.6	315.6	285.8

N.A.-Not Available

FACTS & FIGURES — Exports & Imports

Bituminous coal, low volatile blends to make coke No. 5213110	Quantity in short tons 9/81	8/81	9/80	Dollar Value 9/81	8/81	9/80	Avg. Value per short ton 9/81	8/81	9/80
Japan	2,277,407	2,020,573	2,088,676	137,029,709	116,604,337	117,649,459	60.17	57.71	56.33
Canada	696,212	623,250	634,566	42,421,693	37,295,598	38,450,325	60.93	59.84	60.59
Belgium	520,349	315,125	177,844	31,876,057	17,988,659	9,117,645	61.14	57.08	51.61
Italy	518,239	726,781	457,284	28,547,041	41,942,336	23,014,997	55.08	57.71	50.33
France	384,763	673,880	472,848	24,151,308	37,710,920	23,409,860	62.77	55.96	49.51
Spain	331,942	435,358	175,622	19,129,968	25,822,518	8,049,853	57.63	59.31	45.84
Germany, F.R. (West)	293,212	173,924	174,841	16,841,182	10,096,345	9,499,462	57.44	58.05	54.33
Sweden	286,735	60,944	227,299	16,364,500	3,652,513	11,922,624	57.07	59.93	52.45
Brazil	223,739	263,609	163,860	14,061,312	17,008,726	8,813,994	62.85	64.52	53.79
Korea, Rep. (South)	195,046	66,544	—	10,827,781	3,297,477	—	55.51	49.55	—
Yugoslavia	189,078	153,812	—	10,453,735	8,638,599	—	55.29	56.16	—
Netherlands	138,214	253,674	197,430	7,894,456	10,840,164	9,764,452	57.12	42.73	49.46
Egypt	123,398	51,672	119,660	7,004,795	2,934,494	6,346,410	56.77	56.79	53.04
Total, above	6,178,334	5,819,146	4,889,930	366,543,537	333,832,686	266,039,081	59.33	57.37	54.41
Total, other nations	573,734	728,866	671,074	33,493,131	42,742,316	34,640,254	58.38	58.64	51.62
Total, all nations	6,752,068	6,548,012	5,561,004	400,036,668	376,575,002	300,679,335	59.25	57.51	54.07
Bituminous coal, others No. 5213120									
Canada	1,542,450	1,305,468	900,820	73,391,622	62,346,600	37,558,021	47.58	47.76	41.69
Italy	442,062	206,759	99,770	20,530,324	9,921,083	3,824,570	46.58	47.98	38.33
Japan	413,521	211,655	21,012	20,637,689	11,285,972	1,184,364	49.91	53.32	56.37
Denmark	369,687	218,767	207,179	15,736,966	9,942,180	7,459,248	42.57	45.45	36.00
France	305,198	435,179	338,092	14,051,274	17,647,530	12,035,151	46.04	40.55	35.60
China, Taiwan	299,261	192,122	65,881	12,400,219	7,738,478	2,432,936	41.44	40.28	36.93
Germany, F.R. (West)	291,961	261,335	50,119	14,557,644	12,701,846	2,357,060	49.86	48.60	47.03
Switzerland	267,516	57,876	—	12,406,601	1,942,651	—	46.38	33.57	—
Spain	253,817	392,053	133,380	12,042,260	17,060,081	7,097,011	47.44	43.51	53.21
Netherlands	237,733	714,209	214,800	10,072,791	37,044,974	9,581,026	46.16	51.87	44.60
Finland	220,369	136,326	74,961	10,240,682	6,972,443	3,198,408	46.47	51.15	42.67
Total, above	4,643,575	4,131,749	2,106,014	217,028,072	194,603,838	86,727,795	46.74	47.10	41.18
Total, other nations	193,150	354,251	598,754	10,274,092	15,724,550	22,243,235	53.19	44.39	37.15
Total, all nations	4,836,725	4,486,000	2,704,768	227,302,164	210,328,388	108,971,030	47.00	46.89	40.29
Lignite No. 5213130									
Total, all nations	3,701	3,258	2,485	1,011,007	410,459	302,439	273.17	125.98	121.71
Coal coke for use as fuel No. 5213148									
Total, all nations	86,830	53,827	198,930	5,508,375	3,482,014	13,237,233	63.44	64.69	66.54
Petroleum coke, except calcined No. 5213150									
Japan	171,894	182,294	175,207	9,263,055	8,618,078	6,874,507	53.89	47.28	39.24
France	106,785	51,915	736	7,064,637	3,351,416	37,440	66.16	64.56	50.87
Total, above	278,679	234,209	175,943	16,327,692	11,969,494	6,911,947	58.59	51.11	39.29
Total, other nations	243,550	452,613	414,886	11,840,702	22,919,175	17,736,054	48.62	50.64	42.75
Total, all nations	522,229	686,822	590,829	28,168,394	34,888,669	24,648,001	53.94	50.80	41.72
Compositions for fuel No. 5213160									
Total, all nations	11,258	41	42	653,924	17,637	5,537	58.09	430.17	131.83
Anthracite No. 5213170									
Korea, Rep. (South)	133,105	190,770	—	4,504,668	6,212,769	—	33.84	32.57	—
Spain	100,102	—	—	4,226,212	—	—	42.22	—	—
Total, above	233,207	190,770	—	8,730,880	6,212,769	—	37.44	32.57	—
Total, other nations	73,868	87,341	95,997	4,787,494	6,267,6866	5,806,587	64.81	71.76	60.49
Total, all nations	307,075	278,111	95,997	13,518,374	12,480,435	5,806,587	44.02	44.88	60.49

In Possible Development of U.S. Properties

Joint Venture Talks Held with Ruhrkohle, Others, Amax Confirms

(Continued from page 1)

weeks. Analysts interpret this activity to Amax's present financial condition, pointing out that low demand, especially for molybdenum, has hurt Amax throughout 1981.

Pierre Gousseland, chairman, discussed at the annual meeting last spring the possibility of "a deployment of assets" without specifically mentioning coal.

The company indicated earlier that it was interested in finding partners to help develop specific coal properties if there might be a spinoff of the coal subsidiary through the sale of some percentage of it. Back in 1974, Amax took similar action when it sold half of its Alumax aluminum operation to Mitsui of Japan, which subsequently sold 10 percent of its holding in the Co. to Nippon Steel. Amax retains its 50 percent ownership of Alumax.

The possibility of a joint venture with Ruhrkohle could pose some interesting problems since much of Amax's coal reserves are located in lands held under federal leases. Ruhrkohle was formed by the Bonn government in the late 1960s from the majority of underground coal companies operating in the Ruhr Valley. The government provided support for the industry whose existence was then threatened by burgeoning oil imports.

All of Ruhrkohle's operations are underground, which led many observers to the belief that the "discussions" were actually being held with Rheinische Braunkohlenwerve AG (Rheinbraun), which operates the world's largest open pit mine near Cologne and mines "brown coal" in the triangle between Aachen-Cologne-Dusseldorf. All of Rheinbraun's operations are open pit mines.

Ruhrkohle produced an estimated 69-million tons of coal in 1980, about 75 percent of that nation's output of hard coal.